

WHAT IS CLAIMED IS:

1. A power apparatus for electromagnetic induction heating means including a heat generating member and an exciting coil provided in the vicinity of the heat generating member and  
5 serving to cause the heat generating member to generate heat by electromagnetic induction, the power apparatus comprising:

a switching unit which supplies a power to the exciting coil;

a switching unit voltage detecting circuit which detects  
10 that a voltage to be applied to the switching unit exceeds a safe operating voltage range; and

a control circuit which controls a power to be supplied to the coil in response to a detection signal of the switching unit voltage detecting circuit.

15

2. The power apparatus according to claim 1, wherein when the switching unit voltage detecting circuit detects that the safe operating voltage range of the switching unit is exceeded, the control circuit limits the supply of the power  
20 to the exciting coil to carry out a control in such a manner that the voltage to be applied to the switching unit maintains a safe operating voltage range limitation.

3. The power apparatus according to claim 1, wherein  
25 when the switching unit voltage detecting circuit detects that

the safe operating voltage range of the switching unit is exceeded, the control circuit detects the supply of the power to the exciting coil and makes the voltage to be applied to the switching unit attenuate on an optional level within a safe  
5 operating voltage range limitation.

4. The power apparatus according to claim 1, wherein when the switching unit voltage detecting circuit detects that the safe operating voltage range of the switching unit is  
10 exceeded, the control circuit stops the supply of the power to the exciting coil.

5. A power apparatus for electromagnetic induction heating means including a heat generating member and an exciting  
15 coil provided in the vicinity of the heat generating member and serving to cause the heat generating member to generate heat by electromagnetic induction, the power apparatus comprising:

a switching unit which supplies a power to the exciting coil;

20 a power apparatus input voltage detecting circuit which detects that a commercial alternating voltage to be input to the power apparatus exceeds a maximum rated input voltage of the power apparatus; and

a control circuit which controls a power to be supplied  
25 to the coil corresponding to a detection signal of the power

apparatus input voltage detecting circuit.

6. The power apparatus according to claim 5, further comprising a power apparatus input voltage detecting circuit  
5 which detects a sharp rising fluctuation in the commercial alternating voltage to be input to the power apparatus.

7. The power apparatus according to claim 4, wherein the control circuit stops supply of a power to the exciting coil  
10 in response to the detection signal of the power apparatus input voltage detecting circuit.

8. The power apparatus according to claim 7, wherein after the control circuit stops the supply of the power to the  
15 exciting coil, an amount of the power supplied to the exciting coil is gradually increased from zero with passage of time in response to a disappearance of the detection signal of the power apparatus input voltage detecting circuit.

20 9. An electromagnetic induction heating fixing apparatus for an image forming apparatus, comprising:

a heat generating member;

an exciting coil provided in the vicinity of the heat generating member; and

25 a power apparatus comprising:

a switching unit which supplies a power to the exciting coil;

a switching unit voltage detecting circuit which detects that a voltage to be applied to the switching unit exceeds a safe operating voltage range; and

a control circuit which controls a power to be supplied to the coil in response to a detection signal of the switching unit voltage detecting circuit.

10        10.    An electromagnetic induction heating fixing apparatus for an image forming apparatus, comprising:

a heat generating member;

an exciting coil provided in the vicinity of the heat generating member; and

15        a power apparatus comprising:

a switching unit which supplies a power to the exciting coil;

a power apparatus input voltage detecting circuit which detects that a commercial alternating voltage to be input to the power apparatus exceeds a maximum rated input voltage of the power apparatus; and

a control circuit which controls a power to be supplied to the coil corresponding to a detection signal of the power apparatus input voltage detecting circuit.

25

11. An image forming apparatus comprising:

photosensitive member;

charger which uniformly charges a surface of the  
photosensitive member to have a predetermined electric  
5 potential;

exposing unit which irradiates scanning line of a light  
beam corresponding to image data on the charged photosensitive  
member, thereby forming electrostatic latent images;

developer which develops the electrostatic latent images  
10 formed on the photosensitive member;

cleaner which removes a toner remaining on the  
photosensitive member; and

an electromagnetic induction heating fixing apparatus  
including a heat generating member, an exciting coil provided  
15 in the vicinity of the heat generating member; and a power  
apparatus, the power apparatus comprising:

a switching unit which supplies a power to the  
exciting coil;

a switching unit voltage detecting circuit which  
20 detects that a voltage to be applied to the switching unit  
exceeds a safe operating voltage range; and

a control circuit which controls a power to be  
supplied to the coil in response to a detection signal of the  
switching unit voltage detecting circuit.

12. An image forming apparatus comprising:

photosensitive member;

charger which uniformly charges a surface of the  
photosensitive member to have a predetermined electric  
5 potential;

exposing unit which irradiates scanning line of a light  
beam corresponding to image data on the charged photosensitive  
member, thereby forming electrostatic latent images;

developer which develops the electrostatic latent images  
10 formed on the photosensitive member;

cleaner which removes a toner remaining on the  
photosensitive member; and

an electromagnetic induction heating fixing apparatus  
including a heat generating member, an exciting coil provided  
15 in the vicinity of the heat generating member; and a power  
apparatus, the power apparatus comprising:

a switching unit which supplies a power to the  
exciting coil;

a power apparatus input voltage detecting circuit  
20 which detects that a commercial alternating voltage to be input  
to the power apparatus exceeds a maximum rated input voltage  
of the power apparatus; and

a control circuit which controls a power to be  
supplied to the coil corresponding to a detection signal of the  
25 power apparatus input voltage detecting circuit.